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ABSTRACT

Goals of the Lilly Post-Doctoral Fellowships Program as defined by the Lilly Endowment and as perceived by the Fellows, campus program directors, and participants in the Lilly Conferences are considered. The Endowment offered small grants (a maximum of three years of support at a maximum of $50,000 each year) to institutions willing to examine how to orient recent Ph.D.s to the teaching profession at their universities. Since its inception in 1974, the program has consisted of two major elements, the on-campus programs, planned and administered by the institutions, and the biannual conferences for all Fellows, planned and administered by the Lilly Endowment. The on-campus programs affected 16 institutions from 1974 through 1980. The common pattern has been for the Endowment to make a grant to the institution to be used for the support of from six to ten Fellows selected by the institution. In addition to their work at the campus, all of the Lilly Fellows and program directors are expected to attend two conferences during the year, which are designed to encourage and facilitate discussion of teaching and learning theories and program experiences, and to consider the influence that institutional values and goals have on faculty philosophies and approaches to teaching. Each Fellow also is expected to write a "letter of reflection" on experiences during the fellowship year. Case studies are presented for the University of Tennessee-Knoxville, Indiana University-Bloomington, and West Virginia University. Additionally, attitudes and activities of the campus program directors, information concerning the conferences, and reflections of the Fellows are considered. (SW)

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Toward Better Teaching

A Report on the
Post-Doctoral Teaching Awards Program
of the Lilly Endowment, Inc.
September 1974 - August 1980

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by
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with an
Introduction by Laura Bornholdt

Lilly Endowment, Inc.
Indianapolis, Indiana

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FOREWORD

> George Woodberry declared that "Education has only one basic factor, a *sine qua non*—one must want it."
>
> James Redfield defined education as "the process by which people become better than they are."
>
> Kirkegaard in his *Journals* focused on one element in education, the teacher: "[To] be a teacher does not mean simply to affirm that such a thing is so, or to deliver a lecture, etc. No, to be a teacher in the right sense is to be a learner. Instruction begins when you, the teacher, learn from the learner, put yourself in his place so that you may understand what he understands and in the way he understands it. . . ."

For the past six years, the Lilly Endowment has experimented with a program which melds the beliefs of Woodberry, Redfield, and Kirkegaard into a credo on which to build for better teaching and learning in the university.

We hope that others—other foundations, junior and senior faculty in colleges and universities, universities outside the geographical range the Endowment has set for the Lilly Post-Doctoral Teaching Awards Program—will find the Lilly experiment of interest. With that in mind, the Endowment invited Alice Beeman to prepare a report on the Lilly Post-Doctoral Teaching Awards Program, now in its seventh year. Beeman has studied the Endowment's files; she has visited several of the campuses and talked to faculty and administrators; she has reflected on the formal evaluations for which the Endowment had contracted. We asked her to describe what she found and then report it, warts and all. She has done just that.

We hope to hear from readers if the report proves of use. Should you be interested in detailed information on programs reported only briefly, you will find the names and addresses of individual program directors in the Appendix.

INTRODUCTION

A working paper prepared for the Lilly Endowment's Board of Directors in February 1974 recommended that the Endowment adopt a comprehensive approach in the emerging field of faculty development. One section of the paper presented some ideas for working with faculty in the context of their disciplinary guilds, another for encouraging programs in their universities. One dealt with the gathering of data relevant to faculty approaching retirement, another recommended launching a program to serve faculty at mid-career. In the section on "Teaching Internships in Colleges and Universities," a plan was offered for inviting an institution to devise an approach for introducing its junior faculty to the profession of teaching, and specifically, to teaching in that institution. The argument for such a program was summarized in one paragraph:

> There is a broad consensus that college and university faculty are prepared in graduate school for only one dimension of their profession. Graduate training for most students emphasizes command of a discipline and develops the capacity for research in it. There is little or no opportunity—even for many who serve as teaching assistants—to reflect upon the principles of individual learning, the concept of building a curriculum, the need to determine teaching strategy according to the nature of the student being instructed, etc. Most institutions which hire freshly minted graduate students as instructors ignore such lopsided preparation, and assume the new teachers sink or swim in the classroom.

Few people would have challenged the analysis; boldness lay in the suggestion that widespread change was possible.

How *could* a foundation influence so deep-rooted, pervasive, and time-honored a set of conditions as those shaping the entire profession of college and university teaching in the United States? Suppose, the working paper said, the Endowment were to seek out a handful of institutions where change or ferment of some kind had produced a group of senior, established faculty with an interest in socializing their junior colleagues and winning their support for change and ferment. Suppose the Endowment were to invite pro-

posals from such institutions for programs which would self-consciously introduce junior faculty to the profession of teaching. Suppose the Lilly Endowment were to choose the most promising of the proposals submitted and subsidize programs at several institutions, relating the programs, universities, and faculty to one another through weekend conferences in the early winter and spring of each academic year. Suppose . . . suppose. . . .

The Lilly Endowment Board agreed to take the risk and acted affirmatively on the 1974 working paper. They renewed the program in 1977, 1978, 1979, and 1980, so that the Endowment's total investment to date is roughly $1.8 million.

The program—initially called the Lilly Post-Doctoral Fellowships Program and subsequently known as the Lilly Post-Doctoral Teaching Awards Program—rested on assumptions which may seem naive to some and over-optimistic to others.

Assumption #1 is that teaching is not an arcane art in which each practitioner is an isolated, self-trained performer, but a profession in which the teacher is also a learner thanks to his or her students (clients), peers (fellow faculty), and older colleagues (tenured faculty and administrators).

Assumption #2 is that the definition of good teaching is inevitably institution-centered and reflects the values of the college or university, its students and faculty. It is not easy for any academic group to reach consensus on the essence of good teaching, but the possibility is strongest where affiliation with the same institution over a period of time has produced common bonds.

Assumption #3 is that lack of imagination, initiative, and drive—not lack of money—accounts for the failure of institutions to concern themselves with the development of their junior scholars into senior professors.

Assumption #4 is that administrative support is essential to long-term success for any faculty development program, just as is faculty ownership.

Building on these assumptions, the Endowment offered small carrots (a maximum of three years of support at a top figure of $50,000 each year) to institutions willing to think seriously about how to orient recently minted Ph.D's to the teaching profession at their universities. Grants were offered a year at a time and it became a standard procedure for the Endowment to bargain with institutions at renewal time, prodding them whenever feasible to make a contribution from their own resources, whether of dollars or of released faculty time. The overall goal was to ensure that extension of the program on institutional funds would not represent an insuperable hurdle after three years of Lilly Endowment support. The institution would have begun its investment much earlier, the budget line would already be there.

In launching the program, the Endowment had no preconceived formulae or panaceas, no simple recipe for transforming scholars into accomplished and committed professors. The three institutions which embarked on programs with Endowment support in the first year of the program—Purdue University, Empire State University of New York, and The Massachusetts Institute of Technology—gave clear testimony of the intended breadth and scope of the Endowment's program. The common denominator among the three institutions was not their definition of excellence in learning/teaching but the presence in each institution of a group of concerned senior faculty who were willing to wrestle with the Endowment's assignment.

Because there was no single blueprint for the program overall, the institutions developed very different campus programs. The proponents were free to spend the $50,000 carrot on as few as five faculty or as many as the institution saw fit. They were free to concentrate on one school of the university or to open it up to all comers, free to appoint tenure-track faculty only or to appoint persons likely to leave the university, free to require each participant to undertake research on teaching or to make research optional.

The planners devised very different fellowships and the Endowment, for its part, allowed one hundred flowers to bloom. It funded one program which featured mentorships with senior professors; it underwrote others in which the key element was provided by research-in-teaching projects. By the second year there was a program which exposed all participating faculty to a single vision of teaching, forcing them to accept the vision or rebut it by articulating an alternative. Still other new programs focused on micro-teaching, video-taping, and most frequently seminars based on common readings. Most institutional programs called for a series of meetings throughout the year; in addition, a few had concentrated one or

two week summer workshops before or after the university year.

Now in the seventh year of experience with the program, the Endowment has begun to limit some of the options it will accept.

> The experience of an overwhelming majority of Fellows led to a decision to exclude faculty in their first year of teaching. There was consensus that only in the second, third, and fourth year do most faculty experience a sufficiently reduced anxiety level over their teaching to be able to reflect productively on the profession, on the curriculum, on learning theory.
>
> The Endowment has firmly excluded liberal arts colleges from the program. This decision does not reflect a belief that effective programs for socializing junior faculty to the profession are common among liberal arts colleges, nor does it reflect disappointment in either of the two programs the Endowment funded at liberal arts colleges—Empire State College in the State University of New York and Bryn Mawr College. In fact, the two programs funded by the Endowment were *so* successful that it was from their example we were led to recognize how much could be done without outside funding. By contrast, the problems of the multi-university, with its emphasis on research and with its standard reliance on graduate assistants in undergraduate teaching, seemed to us problems of a different order and deserving of more foundation attention and higher priority.
>
> The Endowment has rejected proposals to use the program for problem teachers. We did not want to help establish clinics for junior faculty who were "excellent scholars and researchers but can't get their acts together as teachers." Rather, the central assumption of the program remains that *all* young teachers can profit from a formal introduction to teaching. A remedial clinic for inadequate faculty, a required course imposed on an unwilling set of students—this was not congenial to the Lilly Endowment.

We think we have learned several things. First, there are institutions where the advocates of excellence in teaching must adopt the

strategy of the subversive. The Endowment is willing to work with such subversives, whether they are isolated administrators or lonely tenured members of the faculty—prophets without honor in their own land.

Second, there are very few institutions where junior faculty *believe* genuine concern for excellence in teaching exists above their rank, whatever the rhetoric of department chairpersons and administrators. Candid exchanges between junior faculty and administrators have often been the price as well as the reward of successful Lilly Endowment orientation programs for junior faculty. When there is a mismatch between the rhetoric for rewarding good teaching and the reality of promotion and tenure at the institution, the truth will out.

Third, no aspect of institutional renewal is more important than identifying and developing human talent, which for the university means development of its faculty. The program which focuses on the junior instructor educates a good many others—those who determine its content and methods, those who defend institutional procedures—and legitimates conversation about teaching and learning throughout the institution. It can be the cornerstone of a first-rate faculty development program in the institution.

We know that from the vantage point of the individual Fellows over the years, participation has often been of critical importance to their development as teachers and as persons. Viewed as an investment in human development, the Lilly Post-Doctoral Teaching Awards program would rank high in any analysis of value received for Endowment dollar invested. The jury is still out on whether the goal of institutional change is secure in the institutions which have held the grants.

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I

THE PROGRAM ON THREE CAMPUSES

Since its inception in 1974, the Lilly Post-Doctoral Teaching Awards Program has consisted of two major elements, the on-campus programs, planned and administered by the institutions themselves, and the biannual conferences for all Fellows, planned and administered by the Lilly Endowment.

The on-campus programs, to which a major part of this report is devoted, affected fourteen institutions in the six academic years, 1974-75 through 1979-80. Two new institutions—one a private university, the other a state institution—were added to the program for the 1980-81 year, now in progress. Most of the participating institutions have been large state universities; two liberal arts colleges (one a unit of a state university), and three private universities have also been included. All participating institutions are located east of the Mississippi; this geographical concentration has facilitated attendance at the conferences and occasional inter-institutional visits by participants.

While each institution has planned its own program, the most common pattern has been for the Endowment to make a grant to the institution to be used for the support of from six to ten Fellows selected by the institution. These Fellows work under the supervision of a faculty program director who is responsible for over-all design and direction of the program, for arranging group activities for the Fellows, and for assisting with the design and execution of individual projects which the Fellows themselves propose. Most institutions offer some released time from teaching duties—about one-third time is usual—to each of their Fellows. Though each campus has had considerable freedom to develop its own program, such plans are, of course, spelled out in the funding proposals and later reports submitted by the institution to the Lilly Endowment.

In addition to their work on their own campuses, all of the Lilly Fellows and program directors are expected to attend two conferences, in December and April of the Fellowship year. These conferences are arranged and financed by the Endowment. The goals of these gatherings are, first, to encourage and facilitate discussion of teaching and learning theories and experience under the leadership of a few nationally recognized leaders, and secondly (and perhaps most importantly), to enable both Fellows and directors to compare ideas and experiences and to perceive the influence that institutional values and goals have upon faculty philosophies and approaches to teaching.

Each Fellow also is expected to write a "letter of reflection" on his or her experiences during the fellowship year. These letters, addressed to the Lilly Endowment, provide both a continuing measure of the effectiveness of the program and a stimulus to the Fellows to summarize and distill their own progress as they review and perhaps reformulate their ideas, attitudes and reflections on techniques of teaching.

Even though there are common elements which run through virtually all the campus-based programs for the improvement of teaching, there are also many differences that make generalized description difficult. To give a clear picture of what the Lilly Post-Doctoral Teaching Awards Program is all about, I selected three institutions for review: the University of Tennessee-Knoxville, Indiana University-Bloomington, and West Virginia University. Other sections of this report deal in some detail with the attitudes and activities of the campus program directors and with the bi-annual conferences, as well as with the reflections and opinions of the Fellows themselves.

1. THE UNIVERSITY OF TENNESSEE-KNOXVILLE

Here are three Fellows from the Lilly Program at the University of Tennessee-Knoxville responding to the question: What did you gain from your year as a Lilly Fellow?

> *"I began to think about teaching as something that could be learned. . . . that teaching is different on different parts of this campus. . . . I'm not sure that all methods of teaching are equally valid, but certainly there is more than one way to teach effectively. Almost any faculty member could improve his teaching, even if it's good to start with. It's mostly a matter of opening people's minds to new ideas, and the fellowship worked wonderfully to do that. . . . Most of us don't have a sense of identity as teachers. When asked what he does, a faculty member almost always answers that he's a biologist, or a sociologist, or whatever. At most, he may say he's a professor, but he almost never says he's a teacher."*

> "Two big gains: (1) I made contacts with others on this campus who are interested in problems of teaching, just as I am, and (2) I got an introduction to a literature I hadn't even known existed. Most of us

who are young faculty members today were brought up to look down on schools of education, or at the very least to see them as preparing teachers for elementary-secondary schools with nothing to say to those going into college teaching. Consequently, we never read about learning or teaching theories; we didn't even know such reading existed."

"I learned that there are a lot of different teaching styles, and that all of them can be valid and effective. I learned that students have different ways of learning, and this has helped me to develop a variety of methods for my own teaching. The interdisciplinary aspect of the Lilly program was important, because it brought Fellows into intimate contact with different teaching styles and with the attitudes and objectives of departments, schools and colleges other than their own."

The University of Tennessee-Knoxville is the original campus of the five-campus University of Tennessee system. It is the state's land-grant institution and its largest comprehensive university, with some 29,000 students enrolled in its 19 colleges and schools.

Ohmer Milton, professor of psychology and director of the Learning Research Center of the University of Tennessee, served as director of the Lilly Program of Post-Doctoral Awards on the Knoxville campus. A member of the University of Tennessee faculty since 1946, he is the only full-time staff member of the Learning Research Center. Operating out of a small suite of offices in one of the oldest buildings on campus, he makes his presence felt through a series of quarterly newsletters, entitled *Teaching-Learning Issues*, which are distributed to all faculty. Each issue is based on appropriate research; many, though not all, are written by Milton himself. Some of the issues still in great demand are: "Evaluating Instruction: Learning/Perceptions," "Grades and Grading," "The Courts and Academic Practice," and "Accent on Learning: PSI or the Keller Plan."

What did Milton gain from his three years as director of the Lilly fellowship programs?

"Oh, this experience has been a tremendous rejuvenation for me. I was beginning to feel burned out, harassed by the general situation, aware of lowered standards of both students and faculty—discouraged

in general. This program gave me a chance to work with three successive groups of bright enthusiastic young teachers. It's made me ready to start all over again!"

When Milton submitted his first plan of operation to the Lilly Endowment and received funding for it, he outlined five elements, and these have been continued with only minor changes throughout the three years, 1977-1980.

1) An all-day opening session for the entire group of Fellows is held in September, as classes are beginning. In the second and third years of the program, Fellows from the preceding periods were invited to attend along with the newly-appointed Fellows.

2) A half-day seminar each week. All Fellows were required to arrange for this block of time.

3) A group project, selected and planned by the Fellows and in which all participated.

4) Individual projects which each Fellow planned and carried out with assistance from Milton.

5) Directed reading. Milton supplied each Fellow, at the beginning of the year, with some basic reading materials, including *Change Magazine*; *Accent on Learning*, Cross; *The Craft of Teaching*, Ebel; *Constructing Achievement Tests*, Grenlund; *Preparing Instructional Objectives*, Mager; *The Testing and Grading of Students*, Milton and Edgerly; and *Faculty Development in a Time of Retrenchment*, Astin *et. al.* In addition, he established a "Fellows' Shelf" of reading materials in the Center's offices. From time to time, he distributed other reading materials or suggested references—and he continues to do this for all the faculty members who were Lilly Fellows during the first three years of the program.

Recipients of the fellowships have been, in large measure, the choice of the deans at the University of Tennessee. The existence of the program has been well and favorably known on campus, and there are frequent individual inquiries or applications. But the final choice has been made by the deans who tend, Milton says, to select their most promising young people. The Lilly Endowment grant

provided funds for nine Fellows—each received one-third released time from teaching duties—and the University of Tennessee supported one or two additional Fellows each year from its own funds. In all, 34 Fellows have participated in the program, and 28 of them are still on the Tennessee-Knoxville faculty.

Both Milton and the Fellows agree that the weekly seminars of three hours each have been a key element of the program. Because they met so often, and because they worked together on some group project each year, the Fellows really became a team. Most Fellows say they continue to keep up their acquaintance with other Fellows and to exchange ideas and plans. They are beginning to "pop up", says Milton, on departmental and college committees on curriculum, tenure, and the like, so that they are beginning to influence institutional policies and procedures.

Another important aspect of the seminars was the opportunity they provided for the Fellows to talk informally about teaching with senior faculty. Milton made extensive use of a group of senior faculty who have in recent years been designated as "Outstanding Teachers" and who have received awards provided by the Alumni Association. These people were invited to occasional seminars to talk with the Fellows about teaching and learning. One Fellow commented about these conversations: "They made me aware of how much outstanding teaching really goes on at this place. These people had a special style—a gusto and commitment to teaching that was evident as soon as you met them. Somehow, these people just have an attitude so that when they walk into a classroom, students immediately feel that this teacher is on their side."

Other guests at the seminars were visiting experts from other campuses, who discussed various specialties in teaching—guided design and computer-assisted instruction, for example. And another important group of guest participants were the top administrators of the University—deans, vice-chancellors, business administrators. Some Fellows were more interested than others in discussions of how University policy and decisions are made, but all probably gained a clearer picture of how the University works. At the same time, the administrators got a first-hand account of the concerns of the junior faculty.

A vital element in the success of these encounters was the simple fact that the fellowship program was interdisciplinary. Each year, about half the Fellows were selected from the College of Arts and Sciences, the largest of U-T's undergraduate divisions. The others came from other schools and colleges, and even within the liberal arts group Fellows came from a variety of disciplines and departments.

The interdisciplinary setting was intellectually stimulating, most of the Fellows agreed. It was also non-threatening. Most young faculty, so the Fellows say, feel that their lives and careers are controlled by their department chairpersons and by the senior faculty in their departments. They are reluctant to "make waves" in departmental meetings, especially if they have not yet been granted tenure. While some Fellows described this attitude as "paranoid" and as "unrealistic," all agreed that such perceptions do exist and do indeed influence behavior and attitudes of junior faculty. Within the Fellows' seminar, however, and away from the usual departmental constraints, ideas, theories and convictions were freely examined and challenged.

Each year, the Fellows selected and participated in some kind of group project—usually research. Such participation, as mentioned earlier, helped build group rapport and "team spirit." Otherwise, evaluations of the projects are rather low, by both the director and the Fellows. The Fellows complain that they spent a lot of time "spinning their wheels" and "floundering about" as they tried to formulate their project. One year's project involved a questionnaire submitted to all faculty members concerning their attitudes on a variety of teaching issues. As one Fellow commented, "a committee of ten can't devise a questionnaire." Though the questionnaire was ultimately completed and faculty response was fair, none of the participants regard it as an important contribution to research.

Indeed, the Fellows are unanimous in the judgment that their individual projects were far more useful to them than the group project. The following are just a few examples of these individual undertakings.

One Fellow developed several games as examples of teaching aids to be used in programs of art education which prepare secondary school teachers. The games, ranging from simple memory quizzes to complex board games, can also be used to teach art appreciation to children at a variety of grade levels.

Another Fellow conducted research on the interrelationships between the environment and learning behavior, specifically on classroom settings as a factor that influences learning.

A third Fellow made a study of faculty counseling in his college. He carried on his study by means of a questionnaire and by lengthy individual interviews, as well as observations of counseling sessions. His conclusions were shared with the dean of the college. (A year later, this Fellow was appointed assistant dean of his college with direct administrative responsiblity for the counseling system.)

Preparation of a syllabus for a first year graduate course on

film as a narrative art form was the project of a fourth Fellow.

Another Fellow made a detailed analysis of students who failed the introductory course in anthropology, seeking to understand factors that cause students to fail. Another wrote a paper on "Thoughts on Teaching Freshman Mathematics," and another worked on "Detailed Objectives for Introductory Physics." One Fellow reports that he is making regular entries in a "Journal on College Teaching," and intends to maintain this regular program of reflecting and analyzing his own progress as a teacher.

Though not labeled as either a group or an individual project, one important outgrowth of the Lilly Endowment Program at the University of Tennessee-Knoxville has been the establishment of an annual Seminar on Teaching for Graduate Teaching Assistants. The general dearth of training in teaching objectives and methods for graduate teaching assistants is deplored on almost every university campus. At Tennessee, the Lilly Fellows decided to do something about it. In September, 1979, the first seminar for GTA's was offered. Based in part on responses to evaluation questionnaires sent to both the teaching assistants and to senior faculty who helped, the 1980 seminar was revised and expanded. The University gave solid support to this effort in the form of a $10,000 budget. The seminar, as announced in late summer, included a three-day program in September, with three half-day sessions to follow one week, three weeks, and two months after the initial seminar. The agenda included such topics as the non-traditional student, the formulation of course objectives and outcomes, test construction, instructional analysis via videotape, nonverbal communication in the classroom, leading group discussion, and personal learning and teaching styles.

The University of Tennessee program of teaching fellowships has now completed its third year under Lilly Endowment funds, but activity is expected to continue under University funding. For example, the College of Arts and Science expects to provide released time for from four to six Fellows; other schools and colleges had not completed their plans when this report was written, but had the matter under active consideration.

Whatever the size or shape of the future program, both Ohmer Milton and the Fellows believe the program has had and will continue to have a significant impact upon the University of Tennessee. Milton explains: "The important thing about the Lilly Endowment program is that there is concrete evidence about the centrality of teaching . . . that teaching is important to big universities. Techniques are not the issue. Some techniques are important, of course,

but a philosophy and attitude toward teaching and learning are more important. The program gave internal stimulus within the University community to think about teaching and try to improve it."

And Milton believes that the most important result of the program, even for the individual Fellows, is that it said to them that "the University of Tennessee means business about teaching—it cares about students and about learning and teaching." One Fellow, when questioned about plans for his own developing career, said he hoped to stay at Tennessee, "because this institution cares about students and about teaching."

Finally, here are some of the comments made by Fellows in their annual reports and "letters of reflection" sent to the Lilly Endowment.

> *"The Lilly program is one of the few places on a campus this size where a young faculty member may really get to know faculty in other departments, which is no small benefit. More important, I have been given an understanding of these departments and colleges that it would have taken years to obtain otherwise and which I, in turn, relay to colleagues in my own department. Finally, I simply learn from these people. I have become acquainted with teaching methods which, while perhaps commonplace to another discipline or department, are wholly novel to me."*

> "The program has definitely caused me to think more about my own teaching. Another positive feature is the opportunity to hear and question teachers of recognized excellence and administrators who decide University policy which affects faculty attitudes toward teaching. To my knowledge, no other such stage is available here. . . . I doubt if my teaching *methods* will change as a result of my association with the Lilly program, but my *attitude* toward the learning process has changed, and I think this will modify my approach to teaching and toward my students. . . . I would hope that those who have been Lilly Fellows take a leadership role in curriculum reform and other teaching-oriented aspects of University life. The Lilly Program here has helped identify and associate a divergent group of faculty who have a common interest in quality in teaching."

"... I'm working with the graduate teaching assistants in our department. The feedback has been quite encouraging, and there are even some professors attending the training sessions. Teaching has become a much discussed topic in our department, and is paid a good deal more attention than in my first two years here."

"To me, the most obvious indication of the success of this program is the enthusiasm shown by the participants. Fellows from two years ago are still interacting and continue their interest in improving college teaching. It appears that a 'core' of individuals who work together on teaching/learning issues has formed as a result of this program."

"The Lilly fellowship in a way is a curse. It makes you think about things you hadn't thought of before, and then you have to do something about them. You'll feel guilty forever if you don't."

"The program was very effective in forging a social bond among a group of young faculty. The year's experience reinforced and reaffirmed the legitimacy of teaching as a career and as a life goal."

2. INDIANA UNIVERSITY

Indiana University completed one year of the Lilly Post-Doctoral Teaching Awards program and began its second year in the fall of 1980. In the proposal submitted to the Lilly Endowment for this second year, Indiana University outlined its goals under three headings: Goals for the Individual Awardee, Departmental Goals, and Institutional Goals. While department and institutional goals are implicit in proposals submitted by all institutions, they are perhaps spelled out most clearly in the Indiana proposal. Some excerpts are given in the following paragraphs.

"Goals for the Individual Awardee: The ideal outcomes for each Fellow are: a carefully thought-out 'philosophy' of teaching; the ability to plan and design a course; wise selection, development, and use of instructional materials; adeptness in selecting

strategies or methods to suit specific objectives of a course; skills in communication with students (e.g., lecturing, discussing skill, etc.); and skills in evaluation. We hope also that, by participating in the year-long program, awardees will have developed a strong identification with teaching as a major cornerstone of their academic careers. . . . Our view of the process of becoming a good University teacher holds that effective teaching skills, materials and techniques only come to be maintained when the faculty member has developed a thoughtful conception of what it means for students to engage in significant learning in the faculty member's discipline. . . . We believe that the route to excellent teaching is a highly individual matter; thus our program must permit individualized approaches."

"*Departmental Goals:* We are convinced that without a supportive climate within the department it is difficult for the faculty member to sustain newly-learned views and skills in teaching. . . . A supportive departmental context probably consists of several elements— visible, coherent policies on teaching which are articulated by both the chairperson and the senior leadership of the department; the allocation of resources to support good teaching, and frequent opportunities for collegial dialogue concerning teaching. . . . By enlisting the support of the department chairperson and enlisting the participation of a senior colleague in the program, we also hope to create a kind of 'multiplier-effect' which will increase concern and dialogue concerning undergraduate teaching within the department."

"*Institutional Goals:* We believe that the Lilly program is helping Indiana University on the Bloomington campus to improve the coordination of its resources for faculty development in teaching. The Lilly program will continue to be planned and publicized so as to increase campus-wide interest in good teaching and to demonstrate in one more way that efforts toward good teaching are rewarded."

While the Lilly Endowment program of fellowships at Indiana

University is similar in many respects to those at other institutions, several factors are unique. One important element in this program is the wide range of support services and resources which exist on the Bloomington campus to assist and improve teaching. In fact, there are five such units, and better coordination of their activities is one of the institutional goals of this program, as perceived by its director, Dr. Thomas Schwen, and by the associate deans of the faculties, William W. Lynch and Stephen L. Wailes. Briefly, these units are:

1) The Teaching Resources Center assists faculty with specific teaching problems and revitalizing old techniques or learning new pedagogical approaches. It has a lending library of books, journals and video tapes, and regularly distributes to all faculty a list of campus-wide "supporting facilities" available to both teachers and students.

2) The Division of Development and Special Projects (Dr. Schwen is director of this unit as well as of the Lilly Endowment program) is concerned with curriculum, faculty, and organizational development. Its budget is contained within the College of Arts and Science, and it works largely with that faculty, though its services are also available to other schools and colleges.

3) The Division of Instructional Services helps to plan and produce audio, graphic, motion picture and photographic teaching materials.

4) The Office for Instructional Computing specializes in computer-assisted instruction.

5) The Bureau of Evaluative Studies and Testing offers help in test construction and interpretation.

One unusual product of the first year of the Lilly Endowment program was that the heads of the five campus service units met together "for the first time in living memory" to discuss their work with the Lilly Fellows. That meeting led to others and to some serious cooperative planning. One result will be a University-wide (the Bloomington, Indianapolis, and regional campuses of the Indiana University system) conference on teaching, to be held early in 1981. A planning committee, including the Dean of Faculties, persons from the five instructional resource units, and faculty representatives, has selected "Individual Differences" as the conference theme. A special session led by the Lilly Fellows will be a part of the conference, to which all Indiana faculty will be invited.

Indiana University at Bloomington is the central campus of the Indiana University system, with some 30,000 students in a wide range of undergraduate and graduate programs. The official publications of the University and the candid statements of its

administrators make it clear that Indiana regards itself as "a research institution," but these sources are also emphatic in asserting that Indiana values good teaching. Every faculty member undergoes an annual review of teaching, research, and service, and salary increments and promotions are based solely upon these assessments. Administrators admit, however, that departments have different methods and standards for the evaluation of teaching effectiveness.

Perhaps a better indication of the University's concern for excellence in teaching is provided by the existence of the five campus-wide resource units, as described above; by the University support given to the proposed conference on teaching; and by the support which the University gives to the Lilly Endowment program itself. In the budget proposal for the 1980-81 grant year, Indiana University estimates its own dollar support for the program as being approximately equal to the amount of the grant from the Endowment. The University provides additional money for the released time which departments must give their Fellows; along with the salary of the program director, who devotes a major portion of his time to the program; secretarial assistance to the Fellows, and a small amount of money to support the workshops and seminars arranged for them.

Dean William Lynch believes that the first year, the Lilly Endowment program served an important catalytic function at Indiana University. It brought together people in the five resource units for the purpose of working with the Fellows, and thus gave them a model for working together on other projects. The Lilly program, he says, has already helped to make the entire campus more aware of the availability of these supporting units, as each of the Fellows uses them and recommends them to teaching colleagues. The directors of the units report that in the first year, they received at least 30 requests for service from faculty members who had heard about them from Lilly Fellows. And finally, Dean Lynch is convinced that the Fellows will be a force for better teaching within their own departments as a result of the fellowship experience, encouraging more attention to teaching and learning issues and more dialogue about them.

From the viewpoint of the Fellows, the unique aspects of the Indiana program are Dr. Schwen's insistence upon a "contract" for each Fellow and his assignment of a doctoral intern from his own Division to work directly and individually with each Fellow.

Schwen regards the contracting process as "the cornerstone of the individual support program." He works initially with each Fellow

to develop a plan for the year's work, to set goals, and to clarify what the University's resource units will provide and what accomplishments will be expected from the Fellow. This contract is put into writing, though in informal terms, and becomes the basis for a year's work, and is periodically reviewed by Schwen and each Fellow. In general, the Fellows agree that the contracts are indeed useful. Two said they resisted the idea at first—"it seemed so technical"—but found the process helpful in clarifying their own objectives and the roles of the program director and the interns. One Fellow commented that the contract included a timetable which she found especially helpful in pacing her work.

The Division of Development and Special Projects, which Schwen heads, has on its staff several doctoral interns—persons in the final year of doctoral work in educational psychology and related fields. Each Fellow was assigned an intern who worked directly with him or her to identify and clarify goals, to locate campus resources that could be helpful, to challenge assumptions and help the Fellow think through the year's work. The Fellows are uniformly enthusiastic about this assistance. One Fellow reports that among other helps, her intern assisted in conducting a student evaluation of one of her courses. She found the student criticisms "wounding," she confessed, but also so helpful that she plans to repeat the evaluation in subsequent terms.

Considering Schwen's conviction that teaching is an individual matter, the emphasis in the program at Indiana University, not surprisingly, is upon individual projects and pursuits, not upon group activity. The Fellows do meet as a group, however, and they speak highly of the bi-monthly seminars and colloquia that have been arranged for them. The topics for these sessions are chosen jointly by the Fellows and Schwen; they have included a workshop on educational games and simulation and presentations on such subjects as achievement testing, course development, tactics in supervising graduate student assistants and similar concerns of the college teacher.

Despite the emphasis upon individual activities, the 1979-80 Fellows achieved what Schwen calls a surprising amount of group cohesion. They maintain contact with one another, look forward to an occasional meeting with the 1980-81 class of Fellows, and are actively assisting in planning the University teaching conference to be held in 1981.

Summarizing the individual projects, Schwen reports that the first year's group accomplished the following: Three of the Fellows concentrated upon getting acquainted with and using the wide range

of teaching resources available through the five campus units and upon practicing in their own classes a range of new teaching strategies. Three Fellows focused on a specific curriculum problem and in the process of solving that problem, acquired a large number of new skills. These three also developed 15 teaching units with media, three complex syllabi, and several related organizational and tactical teaching improvements. Finally, two of the Fellows reassessed the content of the courses they are teaching, reading widely, and reformulating their concepts of the courses and reconstructing their syllabi accordingly.

Indiana University Fellows, like those at other institutions, have reflected upon their experience and written reports for the Lilly Endowment. Some of these reflections follow.

> *"Before receiving this fellowship, I had gained sufficient teaching experience so as to recognize both my teaching strengths and weaknesses, but as the pressure to publish for tenure became increasingly strong, I felt that I lacked the time to reflect on either. The Lilly Fellowship has enabled me both to assess my past teaching experience in order to learn from successes and failures, and to explore new teaching strategies—without detriment to my research activites."*

> "For me, the best features of the program have been its flexibility (which has permitted us to work on radically different projects) and its making available to us in a coordinated fashion the rich teaching resources of the University. Tom Schwen has been extraordinarily helpful; he assigned two of his best interns in Instructional Systems Technology to work with me on the redesigning of a required social science methods course."

> *"In devising joint activities, we have had an eye not only to our own needs as teachers but also to our role as proselytizers. For example, in bringing in someone to deliver a public lecture on cross-disciplinary team-teaching, we will in addition to informing ourselves about a matter of great interest, be suggesting a valuable innovation for the university community at large."*

"I have focused on a reappraisal and restructuring of a large lecture course I have now taught twice and would like to continue to teach for several years. My activity has centered on this course, but I have also used the experience as a model for thinking about teaching problems in other courses."

"Without question, the most successful aspect of the Indiana program has been the combination of group meetings to discuss teaching problems and individual work on projects with resource agency help. In this way, I have been able to deal in a serious way with a problem of immediate significance to me while gaining a broader perspective on teaching problems from discussions with my peers and experts."

"I have already learned to examine my motives as a teacher: that is, not to present material, to give assignments or tests without very carefully considering the question 'what will it profit the student to know?' or, to put it another way, 'why am I doing this?' I am learning that mastering the content and even organizing it logically do not in themselves guarantee effective teaching."

"A further benefit of the Lilly Program at IU is that senior faculty from my department have been able to offer comments, suggestions, and criticisms regarding my proposed course changes. The enthusiastic support of the senior faculty ensures that the teaching innovations begun with my Fellowship will continue in the department and will be applied to other undergraduate courses."

"Because teaching is too often a private and lonely enterprise, it is good to have a group of fellows at an institution. I am sure that our group at IU will continue to meet after our year as official Lilly Fellows is over. So often it's taboo to talk about problems in teaching, but we're breaking that silence. Finally, I think a group can make itself felt where a few individuals cannot."

3. WEST VIRGINIA UNIVERSITY

The title of the printed folder distributed in the winter to all West Virginia University faculty members is *WVU Instructional Fellows Program*. On the title page is this quotation: "Good teachers aren't born—they are developed." A further line explains that this is a program for "Released time and summer salary to learn about and apply alternative methods of instruction."

These fellowships—ten were announced for 1980-81—are entirely funded by the University, but they are a direct outgrowth of the Lilly Program of Post-Doctoral Teaching Awards, for which West Virginia received grants in 1975-76 and 1976-77. Only minor changes have been made in the program since its establishment under Lilly Endowment auspices, so a further look at the 1980-81 announcement is appropriate. These are the promised elements of the program:

1. *Teaching Learning Workshops*. Fellows are required to attend a two-day workshop prior to the beginning of classes in the fall and a half-day workshop each month. The agenda includes topics such as the psychology of teaching and learning; use of several innovative instructional techniques including Personalized System of Instruction, Audio-Tutorial, and Guided Design; and the evaluation of both student performance and instructional systems.

2. *Visiting Innovative Classes*. Arrangements will be made for the Fellows to observe alternative teaching-learning-testing activities in the classroom.

3. *Teaching a Model Course*. All Fellows will be expected to assist directly in the teaching of classes using alternative methods of instruction.

4. *Released Time*. Each Fellow is to be released from at least one course in his own department in order to permit participation in the fellowship program.

5. *Summer Workshop*. Immediately following the end of the spring term, the Fellows will engage (on full salary) in a six-week workshop. They will work on individual projects, usually preparation of new materials or design of new courses, and will be assisted by the directors of the project.

Only full-time regular teaching staff are eligible to apply for the program, and applications must have the endorsement of the department chairperson and dean. Applications are received and reviewed in the Office of the Associate Vice President for Academic Affairs.

The final page of the 1980-81 announcement contains a list of "alumni" of the program. Names and departments of 42 former Fellows are listed, and the departments include a wide range of disciplines, from agriculture to romance languages.

The driving force of the West Virginia program, now entering its sixth year, has been the enthusiasm and energy of its co-directors: Dr. Charles E. Wales, professor of engineering and education, and Dr. Gene D'Amour, associate professor of philosophy. (Dr. D'Amour recently moved to Tulane University, and his work as co-director has been assumed by Dr. Anne Nardi, a former Fellow and a faculty member in the School of Human Resources and Education.) Wales and a colleague in engineering, Russell A. Stager, are the developers of an instructional system they call "Guided Design." The model course in which Fellows are required to teach is "The Nature of Evidence." This multi-disciplinary course was developed by Wales and D'Amour, and it relies almost altogether on the use of the Guided Design method of instruction.

The fellowship program at West Virginia is highly structured; that is, the topics for the workshops, the content of the model course, the innovative classes and methods of instruction which are visited and studied are all largely chosen by the directors of the program, not by the Fellows. The Fellows do, of course, choose their individual projects for the six-weeks summer workshop—more than half have elected to develop Guided Design units for their own courses. Fellows may receive graduate credit for the fellowship year, or they may receive continuing education units for completing the program. Formal enrollment for either type of credit is not a requirement, however.

Wales, not surprisingly, is a strong advocate of Guided Design—a method of instruction that might more accurately be called Guided Decision-Making. It is based on the theory that students learn most readily in the context of open-ended problems, where it becomes necessary for them to acquire information and skills in order to analyze an assigned problem, devise possible solutions, and make choices and decisions. Wales' work in developing Guided Design was originally supported by the Exxon Foundation, and he and others have taught this method in scores of teaching workshops throughout the country in the last half-dozen years. The method is

now used in many disciplines other than engineering.

Most of the people who have held instructional fellowships at West Virginia University, either through the Lilly Endowment grant or from University funds, are still teaching at WVU. Because of the distribution of the fellowships among all the schools and colleges of the University, Wales and Nardi believe that the program has had and will continue to have a University-wide impact. It has served to "raise consciousness" about the need for better teaching. The Fellows comment, however, that they have little contact with one another after the fellowship year is ended, and there is little evidence of group cohesiveness or of any thought of group action.

University support for the fellowship program has come largely through the efforts of Ralph Nelson, associate vice president for academic affairs. In each of the past several years, he has been able to budget about $40,000 for "faculty development." A substantial portion of that sum goes to support the program of instructional fellowships. Wales, for example, has one-fourth of his salary charged to the Office of Academic Affairs rather than to the College of Engineering. While Fellows are not paid directly for the fellowship, except for the summer workshop, their departments or schools must provide the released time for their fellowship work. Thus, the expense of the program is spread thoughout the University and is greater than the budget designated "faculty development" might indicate. Several Fellows, incidentally, have complained that the "released time" is more fiction than fact. In one instance, a Fellow reports being released only from committee assignments, not from teaching. Even those who complain, however, say the fellowship experience is worth the work overload it may involve.

West Virginia University does not have a central campus-wide unit for faculty development or for assistance to individual faculty members who wish to improve their skills and techniques. According to one administrator, "We don't really reward good teaching; we condone mediocrity." Another administrator expresses both optimism and pessimism about the future of the Fellows' program at West Virginia. It may be possible to continue, despite budget cuts mandated by the state legislature, because the teaching improvement program is "low cost".

West Virginia University, like most state universities, places great emphasis upon research. The University has ambitions for greater national prestige, and research is seen as the way to achieve that goal. Further, the State of West Virginia, in proportion to its population, supports a large number of state universities and colleges, including two medical schools and a college of osteopathic

medicine. All compete for funds from a legislature which is coping with declining tax revenues, at least in the recession of 1980.

At West Virginia, as elsewhere, favorable decisions on tenure, promotion, and salary increases are based on a review of the faculty member's record in research, teaching, and public service. It is expected, an administrator explains, that each person will be excellent in at least two of the three. In reality, this is usually interpreted to require excellence in research and in at least one of the other two areas. In the case of the tenured faculty, there is no "punishment" for bad teaching, though if the teaching is bad enough, "the University will minimize the damage" by assigning the person to non-teaching duties. If a non-tenured person is a poor teacher, then of course punishment in the form of non-renewal of appointment is quite possible.

Perhaps the difficulties encountered by those who are deeply concerned about faculty development and good teaching can be illustrated by a glance at the front page of the Morgantown, West Virginia, daily newspaper for Friday, September 5, 1980. There were three big headlines on the page: "Mountaineer Fans Ready for Stadium Opener," "WVU Library is Falling Behind," and "University Faculty Calls Fiscal Constraints Stifling."

The banner story recounted preparations for the opening on the following day of a new $22-million stadium. The governor of the state was to be present to cut the ribbons opening $17-million worth of access roads to the stadium. The other two front-page stories emanated from meetings of the Board of Regents, governing body for all of the state's universities and colleges. Administrators, faculty, and students had told the Regents how cutbacks in the University's operating funds, determined by the legislature and the governor's office, were adversely affecting the instructional program and resources. Specifically, they pointed out that shortage of funds had forced a 20 percent reduction in class offerings during the summer sessions just ended and a cutback from 12-month to 8-month appointments for a substantial number of University staff people.

An unknown factor in predicting the future of the instructional fellows program is the degree of support it may or may not receive from top campus administrators. Ralph Nelson, associate vice president for academic affairs and a strong supporter of faculty development, resigned from West Virginia to accept a post at the American University in Cairo. Gene D'Amour, one of the original directors of the program, moved to another university. Occasional administrative changes are to be expected, of course, but they leave unanswered the question of long-range administrative commitment

of "hard money" from University funds to support this fellowship program and other faculty development activities. Commitment to the concept of faculty development by a few deans, however, may very well keep the fellowship program alive.

The two unique features of the West Virginia fellowship program are the requirement that all Fellows assist with the "model course" in "The Nature of Evidence," and the six-week summer workshop in which each Fellow may pursue an individual interest or project. How do directors and Fellows feel about these elements?

Wales and Nardi say that, for most Fellows, teaching the course in "The Nature of Evidence" and making use of the Guided Design technique is "like teaching for the first time." West Virginia does not limit its fellowships to junior faculty in their first few years of teaching; some Fellows have taught for as many as twenty years when they enter the program. Suddenly, in the model course, they find themselves novices all over again—and that can be very unsettling. "Some Fellows find it an ungodly experience," Dr. Nardi admits. "People who consider themselves already well-established as teachers may feel quite threatened." Both directors of the program are convinced that teaching in the model course is useful and helpful, and in retrospect, most Fellows agree. The Fellows say that they came to see Guided Design as a different way of organizing instruction, and that they felt free both to criticize the materials in "The Nature of Evidence" course and to design new ones to use in their own regular teaching fields. And, of course, many fellows have no problem at all in accepting and adapting to the model course and its Guided Design, and describe it as an interesting and eye-opening experience.

The summer workshops are an unqualified success, in the opinion of all. In fact, the promise of six weeks of paid time in which to reflect on teaching and to prepare teaching materials, or to design new courses and re-plan old ones, is the "carrot" which persuades some faculty to apply for the fellowship in the first place.

In a report to the Lilly Endowment on the two years of the fellowships which were grant-supported, Wales summarized some typical accomplishments during the summer workshops:

Two Fellows produced a Guided Design unit on "Defining the Central Business District" which is widely used in geography classes at WVU. The project also won first prize in the National Council on Geographic Education competition and was published in the *Journal of Geography*.

Two Fellows worked together to develop a Guided Design project for a senior level highway engineering course, intended to teach

principles of highway design and also how to deal with the real-life problem of political interference in such design.

One Fellow prepared a Personalized System of Instruction (PSI) presentation of an introductory course in formal logic. This material was subsequently used in the Fellow's courses, and received high ratings on the term-end student evaluations. Later, the Fellow expanded the material for publication in book form.

One Fellow planned an entire new course, an elective for seniors in the School of Nursing. Her material included one Guided Design unit and several PSI units. This course has been successfully offered at WVU for two years.

In the years that the West Virginia program was supported by grants from the Lilly Endowment, the Fellows were invited to attend the biannual national conferences arranged by the Endowment for all its Fellows. Wales regards these conferences as outstanding and as making an important contribution to broadening the Fellows' acquaintance with alternative teaching methods and styles. He sees the inability of West Virginia to provide a similar experience for its own Fellows as a serious weakness.

When the Fellows are questioned about what they gained from the fellowship experience, some common assessments quickly emerge. Nearly all say that the fellowship convinced them that there is no single "right" way to teach; there are many alternative methods and technologies, many styles, any of which may be "good" and successful, depending upon the teacher and learning situation. The year gives them time to focus on teaching as distinct from research; it provides a sense of direction as they seek to improve their teaching and gives them an opportunity to experiment and evaluate the results.

Each year, the Lilly Endowment asks each of the Fellows at all of the participating institutions to write a "letter of reflection" on the fellowship experience. The following excerpts are from West Virginia Fellows in 1975-76 and 1976-77.

> *"I strongly feel that programs such as these should be interdisciplinary. Many times faculty become so involved in their field of specialization that they fail to recognize the contributions of other disciplines or see how a particular course fits into the overall learning experience. In my own field, practicing civil engineers today must work with a variety of people including lawyers, sociologists, economists, and politicians. Thus, it is vitally important that future engineers have*

at least a basic knowledge of and appreciation for what other disciplines are involved in. Through our weekly seminar sessions here at West Virginia University, I have had the opportunity to work with individuals from several different disciplines. . . .My experience in the Lilly Award Program has already begun to influence my teaching."

"The best feature of Guided Design is the pacing element. Students do not self-pace but they cannot fall behind the rest of the class (they work in groups). They are forced to keep pace with their peers and maintain a reasonable rate of learning. The worst feature of Guided Design is the time required for the preparation of a guided design course. Writing, organization, and rewriting consume an enormous amount of time."

"After receiving my doctorate in 1974 I felt competent in two areas: 1) theater history research and 2) directing of stage plays. Since then, it has become clear to me that I was lacking in any kind of systematic approach to teaching. Reflecting back, I wonder how I managed to accomplish as much as I did in the classroom. . . . Now, with the Lilly Program, I have suddenly come face to face with a plethora of teaching ideas that, with continued work and reflection, would improve my teaching effectiveness. I am excited about the future."

"The second phase of the WVU Lilly Program (the summer stipend for developing course materials) has the potential of being just what the doctor ordered. By this, I mean that it is difficult to do substantive course revisions between committee meetings, classes, and student counseling. Even though I have been released from teaching one course each semester, it is difficult to find blocks of time to do any prolonged work. . . . If this letter sounds like it was written by a kid in a candy store it is probably because to some extent I feel that way about the Lilly Program."

"I would say the most beneficial aspect of the program

so far for me has been the monthly Saturday morning seminars, where we have discussed a variety of innovative teaching techniques, such as programmed instruction, PSI, and the uses of audio-visual materials. Another useful 'assignment' was to visit four different innovative classes and observe these methods in use. I have learned a great deal, not only from the exposure to the methods themselves, but also from talking to other faculty members about teaching. It has been a real 'consiousness raising' experience for me. . . . I am sure my own teaching has already improved as a result of my participation in the Lilly program. It is easy to get in a rut after a few years of teaching, and to think that one's own methods are invariably the best; perhaps the most helpful aspect of the program for me so far has been simply to make me <u>think</u> more about teaching, and to care very much about improving it as much as possible."

"A most important benefit of the program has been my introduction to a network of concerned educators at the university. . . . The activities and seminars have provided an introduction to educational programs and resources throughout the twin campuses of the university which would have taken a considerable time to discover independently. In addition, I have been introduced to an array of innovative educational techniques. I have had the opportunity to view these techniques in classroom use. . . . Regular seminars have provided a forum for discussion of the strengths and weaknesses of the alternative approaches with the individuals who developed them. Finally, the opportunity to try my hand at developing materials for alternative teaching approaches together with my current teaching of a Guided Design course is giving me some experience with options I would not have otherwise considered."

II

THE PROGRAM DIRECTORS

Many factors affect the degree of success achieved by the Lilly Post-Doctoral Fellowship program on an individual campus—attitude of top administrators, interest and dedication of the Fellows themselves, supportive resources available on campus, and the attitude of deans, department chairpersons and other senior faculty, to name a few. But the role of the campus director of the program is perhaps the most important factor of all.

The directors are not cut from a single mold. Among the institutions which have received grants from The Lilly Endowment for this fellowship program, about half the directors have titles such as "director of the learning research center" or "director of the division of study and research in education." But others are professors of engineering or botany or philosophy or medicine. A third group are general campus administrators—dean of faculties, provost or vice president, dean of academic affairs.

If no single program director may be described as typical, then perhaps a visit with one director, a veteran of more than thirty years of teaching and the developer of a widely-respected innovation in teaching technology who is still intensely interested in the teaching of freshmen, will serve as an introduction to the entire group of directors.

The sign on his office door says, "In this office students have priority ALWAYS." Just inside the door is a wall poster with this message: "Failure is the path of least resistance."

Corny? Perhaps . . . but both signs are genuine expressions of the philosophy of Samuel N. Postlethwait, professor of biology at Purdue University and director of Purdue's program of Lilly Post-Doctoral Fellowships for improvement of teaching, 1973-76.

Postlethwait began his teaching career when, just out of high school, he taught in a one-room rural school in Hickory Nob, West Virginia. In that schoolroom, where he had fifteen pupils scattered among eight grades, he learned two things that have stayed with him throughout a lifetime of learning and teaching: that people learn from one another as readily as from books and other teaching materials, and that some experience in success in learning is essential to further learning.

"Students, especially freshmen, are looking for a way to learn," he observes. "Many of those who come to college don't have a strategy, let alone tactics, for learning. Education, for them,

must be learning how to learn."

Postlethwait explains that he has a philosophy of learning something himself out of every new experience. "One of the greatest human wastes is that of going through life without taking advantage of the opportunity to learn from every situation in which you find yourself."

A key reason for Postlethwait's interest in the Lilly Endowment program was his desire to do a better job of teaching his freshman course in biology. He has taught this course every year since 1950, with some 800 students enrolled each fall. And every September, he says, he finds himself with a "frantic feeling that I'm not ready yet"—that the new ideas, or new techniques, or new materials that he wants to instill in this year's instruction are not as polished as he would like them to be.

In planning the program for the Lilly Fellows, Postlethwait built upon the teaching of his freshman course. Each Fellow was required to complete some project related to the improvement of teaching in that specific course. Not all Fellows are botanists—indeed, nearly all were from other disciplines. But they applied an educational technology or conducted methodological research or in some other indirect way made a contribution to the teaching of Botany 101.

Postlethwait sought and obtained support from both the Lilly Endowment and the Sloan Foundation, thus enabling him to offer a teaching internship, or fellowship program for five years, with from eight to fourteen Fellows each year. The Purdue program, unlike others supported by Lilly, was not limited to junior faculty members at Purdue itself. Instead, Postlethwait solicited applications on a national basis, though all recipients were required to spend the fellowship year at Purdue. This has had the result of spreading Postlethwait's teaching about teaching throughout the country. It also means, however, that Purdue does not now have a cadre of young faculty who have shared an intensive year's experience of working to improve their teaching.

Postlethwait provided some general guidelines for each of his Fellows, but also permitted plenty of flexibility so that each person could pursue individual interests. Each Fellow then "led the rest of us"—including Postlethwait himself, of course—in coming to understand his special interest in pedagogy, whether it was instructional design systems, educational technology such as audio-tutorial plans, lecturing, or whatever. Such "leading" took place in regular seminars or meetings of program director and Fellows. Postlethwait says he didn't set goals for the individual Fellows, but expected each

to set his own—"but I insisted that each person work and show evidence of some accomplishment."

One of the problems encountered by a conscientious and innovative teacher, especially in a big institution, is that "education has procedures wrapped around administrative convenience," Postlethwait observes. "We don't question the way we do things, or ask ourselves if our procedures really promote maximum learning by the students, because if we do raise questions or change things, we are likely to annoy the janitor, or the departmental secretary. And if those folks are annoyed, quite possibly a junior administrator or a senior administrator may become annoyed. And finally, of course, you may upset the computer program."

Postlethwait smiles as he admits that even today, twenty years after he began altering the traditional lecture-lab-quiz routine in freshman botany, he sometimes has to sweep out his "Learning Center" himself. That Learning Center, designed to Postlethwait's specifications to facilitate the use of the audio-tutorial system, has 32 booths, each with a tape recorder, an 8 mm movie projector, and other materials for the given week's work assigned to students. The Center is open from 7:30 a.m. to 10:30 p.m. Monday through Friday, and an instructor or graduate student assistant (and not infrequently Professor Postlethwait himself) is always on hand to help out. Since that kind of daily schedule may not always fit custodial schedules, the professor or his assistants sometimes find themselves also on the clean-up squad.

How did a senior professor in the biological sciences get so deeply into the subject of improving teaching?

At 18, when Sam Postlethwait did his first teaching in that rural one-room school he had never taken a course in how to teach, he simply did what he had seen his own teachers do. At the end of the first six weeks, he dutifully distributed report cards. He still remembers a little girl who came running after him in the school yard to tug at his coat and say excitedly, "Oh, Mr. Postlethwait, look—I got an A." That taught him, he says, that the experience of success in learning is essential to continued effort to learn. And ever since, he has worked with the conviction that his instructional goal is to enable students to be successful in learning.

That sounds simple and obvious, he admits, and every teacher probably would tell you that is what he or she tries to do. Nonetheless, by the time a student gets to college, his goal usually is not to be successful in learning but rather to get grades and degrees. Much of our educational system, Postlethwait asserts, is devoted to screening and eliminating people rather than helping them to learn. "In fact,"

he says, "you might think that our goal is to make sure that the people we label as 'dummies' don't learn our precious discipline. We've forgotten that the purpose of education is not to eliminate the non-elite but to further learning. So I don't look at my 800 freshmen in September with an eye to how many of them I can eliminate from the course by failure. In fact, I'm probably more concerned about their success in learning than some of them are. Along the line, as they've progressed through our school system, they've learned that the goal is to outwit or outlast the teacher. And some, who are enrolled in my course because it is required, are determined both to get through the course with a passing grade and to learn nothing while doing so."

The Lilly Endowment program of Post-Doctoral Fellowships has its greatest strength, Postlethwait says, in the fact that it works with the element that makes the biggest difference in the classroom, the people who do the teaching. Grants of money may enable a college or university to buy more computers or prepare more audio-visual materials, but more and better equipment and technology do not necessarily make for greater learning. Better teaching is the road to greater learning.

The Lilly Endowment program supports junior faculty members, and Postlethwait regards that as of great importance. He is proud of his former Fellows now teaching in colleges and universities throughout the country. He hears regularly from many of them and feels they will be catalysts for better teaching wherever they are. But he also hopes Lilly Endowment, or some other foundation, will provide similar support for mid-career teachers so that they, too, can take time to reassess their teaching philosophies and methods. "What a student brings to a situation determines in part how much he will learn, and mid-career teachers bring more than beginners do," he points out.

The experience of directing the work of the Lilly and Sloan Teaching Fellows has had a profound effect on Postlethwait. He started the program at Purdue because he wanted to learn from it himself and because he wanted to improve the teaching of his own course. But his years as director of this program led him ever-deeper into questions of learning and teaching. In 1978, he applied for and received one of the Faculty Open Fellowships offered by The Lilly Endowment to faculty in Indiana colleges and universities. His application set forth two proposed activities for his fellowship year:

1. A period of reading and reflection on current learning theory as expressed in the most recent

books of leading educational psychologists (Gagne, Bruner, Ausubel, Skinner, Piaget, Bloom, Perry).

2. A period of designing and developing some new instructional tools not presently being employed in teaching. This involved:

   a) The creation of a set of instructional programs composed of sequential illustrations to portray certain biological phenomena, and

   b) designing two-page texts on several biological topics.

Postlethwait's final report on his sabbatical year begins: "Wow! What a wonderful year!" And it continues, ". . . learning is a never-ending process. It is not possible to say that the reading and reflection is completed, for it will continue for the rest of my life."

When he received the faculty fellowship, Postlethwait bought a 27-foot trailer and a van to pull it. He organized his office in one end of the trailer, with books and notes in easy reach. He spent portions of his sabbatical year visiting sites of particular botanical interest, alternating such scientific investigations with reading and reflecting on education. He spent many hours working on the "sequential illustrations" to demonstrate biological processes, which he believes students can understand more readily than traditional diagrams. And he wrote a number of the "two-page" texts mentioned in his application.

"I am convinced that the present-day student is highly acclimated to rapid change and that some of our teaching methods which are slow to get at major points or issues are incompatible with the tempo of life as our students experience it. A large amount of information can be included in a limited space when clever illustrations are accompanied by a well-organized and succinctly stated text. These topic pages I have chosen to call 'impact pages,'" Postlethwait explains.

"If learning is done by the learner, as teachers nearly all agree, then teaching is organizing and orchestrating learning activities by students," Postlethwait declares. "What the teacher does is of little consequence otherwise."

Though a believer in educational technology and a powerful advocate of the audio-tutorial method which he himself developed, Postlethwait insists that "You don't start with the technology. You start with the question the student needs to ask and answer."

In his own teaching of that all-important freshman course in botany, Postlethwait says he has three goals:

1) Help the students identify that which is botany and worthy of attention,

2) Make it convenient for the students to have access to botanical information, and

3) Convince the students that botany is a tremendous subject and that they want to learn it.

III

THE LILLY CONFERENCES

At each institution receiving a Lilly Endowment grant, one important feature of the program is the encouragement of a continuing discussion of teaching by Fellows and their senior colleagues on the faculty. Twice each year, this discussion is transferred to a larger stage when the Endowment brings all the Fellows and program directors together for a weekend conference. The Lilly Endowment Conferences, in December and April of each academic year, include presentations by nationally recognized authorities on learning and teaching and presentations of some individual projects and campus programs by the Fellows themselves. The major portion of the time of each conference, however, is devoted to discussion, by the entire body, in small groups, and one-on-one.

Several people have shared the leadership of these conferences during the past six years, chief among them William G. Perry, Jr., now retired but for many years director of the Bureau of Study Counsel at Harvard University, and Kiyo Morimoto, a long-time associate who has succeeded Perry as director of the Bureau. Other leaders have included Joseph Katz, director of the Research Group for Human Development at the State University of New York-Stony Brook; Paul Lacey, professor of English, Earlham College; and W. Max Wise, professor emeritus, Teacher's College, Columbia University. Paul Lacey, participant in one conference, now directs the program for the Endowment from his base at Earlham.

At several of the conferences, Morimoto has launched the discussion by talking about the "context for learning." The following excerpt from one of his essays on this subject provides a clear rationale for the Lilly Endowment Conferences:

> "If we look upon teaching as essentially an interpersonal experience, then it seems that our central concern must be the development of interpersonal skills in line with an understanding of how people learn and change. Any effort to define the responsibilities and functions of a teacher inevitably spills over into a discussion of one's philosophy of teaching and of learning. The question then becomes how that philosophy is articulated in practice.
>
> "I have been concerned with helping the individual

teacher achieve a fuller realization of his or her own professional and personal resources with the hope that these may become more available to students in their efforts to learn. While individual consultation is often invaluable, working with teachers in groups seems to offer special opportunities. Such a setting invites teachers to explore the various perspectives from which they view their teaching worlds. Through discussion, each teacher can compare issues of central concern to him or herself with issues of importance to his or her colleagues, and come to understand individual differences in desires, assumptions and purposes. This can lead to the consideration of a variety of approaches or addresses to any one issue. The group leader serves as a catalyst and a resource in the learning process, rather than as a final authority or judge of what teachers 'should' learn.

"As soon as group members come together, what I call a *context of learning* begins to develop. Words such as 'atmosphere' or 'climate' mean much the same thing, but I prefer the word context. 'Context' derives from a word meaning 'to weave': patterns, continuities, and various threads run through a particular setting, forming a kind of fabric of interchange and exploration. These threads are in large part defined by the assumptions that the leader and the various group members bring with them—assumptions about how learning occurs and what relationship teachers and students have to this process."

William G. Perry, Jr., is the author of *Forms of Intellectual and Ethical Development in the College Years*, first published in 1968 and still in demand. In fact, there is almost an "underground" element about this book, for though it is still available from the publisher, it has never been widely advertised and has found its devoted audience more by word-of-mouth than by commercial promotion. The book has been given to Lilly Fellows as a starting point for discussion at several conferences; Perry has attended at least one conference for each fellowship class.

"Every art in the world is considered by university professors to be capable of analysis except one—the art of teaching," Perry chuckles. "But we believe the art of teaching can also be profitably

examined. We try to give the Fellows a chance to get a revised way of looking at what they are trying to do in the classroom—to see students as people and as individuals who are at different stages of growth and maturity."

Perry's book offers a "scheme" of the maturation, or the intellectual and ethical development, of students during the four college years. Very briefly, this scheme involves nine "positions" or stages of growth. These range from the first, described as "basic duality," in which the student sees the world as consisting of *Right* and *Wrong* and with all problems capable of solution by following *Authority*, to the ninth position, described as "developing commitments." In this mature position, which Perry makes clear is not attained by all students (nor by all faculty, for that matter), the person can accept and cope with differing values, conflicting authorities, and tensions between freedom and constraint, can commit himself or herself to intellectual and ethical positions, and can accept responsibility for such commitments and their consequences.

While Perry believes it is possible both to describe these nine positions and to identify the position in which a given student is functioning, he emphasizes that students do not automatically progress from position one as freshmen to position nine as graduating seniors. Within any classroom, regardless of the level of instruction, students will present a variety of these positions or stages of growth. The task of the teacher is to recognize the variations and to deal with the individual differences and with the frustrations and moral dilemmas they create for the students themselves.

"Very few teachers stop to confirm a student in the legitimacy of what he's doing before they correct him on his facts," Perry observes. "Yet confirmation of the usefulness, of the value of what he's trying to do and to learn may be far more important to the student than a particular item of information."

Perry has much to say to the Fellows about the need for them to match their teaching techniques and strategies to the developmental stage of their students. Because a group of students almost always includes several stages of development, no single strategy will reach them all, hence the need for constant assessment by the teacher of the effectiveness of his strategies and of the response of his students.

Though this may sound like a difficult task, and indeed it is difficult, the Lilly Fellows often seem to experience a "sense of relief" when they comprehend Perry's scheme of development and maturation, he says. They begin to understand, he adds, why they are successful with some students and not with others, and they can then plan in useful ways to change or improve their approach to those

with whom they have previously been unsuccessful.

Perry declares that on every campus, there is a "subculture" devoted to good teaching. Though full professors, deans, vice presidents, and even presidents may be members of this subculture, its energy comes chiefly from the young teachers. The more of these young people who can be involved in the subculture, the more good teaching will be accomplished within that college or university.

"In every so-called research institution," Perry says, "there are faculty members who are dedicated to good teaching. It helps when they find one another. It reduces their sense of isolation and loneliness, and of course it multiplies their influence and strength within the institution. The Lilly Endowment Conferences admirably serve those purposes by bringing together people who are interested in good teaching and thereby multiplying their effectiveness and their influence within their universities."

Both Perry and Morimoto observe that in the conference setting, where all the Fellows participate on an equal basis, it is acceptable, indeed desirable, to engage in self-analysis and examination.

"Once this process of self-examination is established, it is likely to continue," Morimoto believes. "The Fellow continues as a teacher who constantly assesses his impact on students and who perceives that teaching involves a personal relationship between teacher and student."

IV

THE FELLOWS REFLECT

In the descriptions of the Lilly Endowment program at the Universities of Tennessee, Indiana, and West Virginia, frequent use was made of the "letters of reflection" written by the Fellows. In requesting these reflections and experiences, the Lilly Endowment urged the Fellows to "comment on any and all aspects of the program" at their institutions. In addition, five specific questions were asked of each year's group of Fellows. The responses to these questions have been helpful to the Lilly Endowment staff, and are likewise essential to any long-term evaluation of this undertaking.

To understand the depth of feeling expressed by so many of the Fellows, it is necessary to read their own testimony. What follows is a selection of verbatim excerpts from the letters of reflection written by Fellows from a dozen institutions over a period of six years.

Is it better to have institutional programs for support of new teachers or should the Endowment try to develop a supra-institutional program for new teachers from all institutions?

> *"I think that it is probably more effective to tailor programs to the needs and cultures of individual institutions. The program at M.I.T reflects our particular set of disciplines, the nature of our student body, and our institutional ambience."*

> "The support of the institutions seems to me in general to be more useful to the improvement of teaching than individual grants. The latter would be largely ineffective without solid institutional support, and might eventually be looked on as just one additional source of income for young scholars, even when they have no realistic prospects for developing new teaching skills. A one-year post-doc, unless it offers exciting teaching prospects of an unusual sort, could be a frustrating way-station; at least half of one's efforts during that year may be devoted to worrying about where the next job is coming from. . . . All this, I think, can be avoided if the institution you support makes a good case for its new program

for improving teaching and strengthening curriculum. That might include support for scholars at any stage in their careers; it might also include on-going support over several years for a long-range program."

"I think it is important for the Lilly Endowment to funnel its support through institutions rather than to develop a supra-institutional program. It seems to me that the closer you can tie incentives for good undergraduate teaching to the particular institution in which it is taking place, the less chance you stand of isolating individual efforts."

Should efforts to orient the scholar to teaching focus on the graduate student, the first-year teacher, or the man/woman in his/her second or third year of teaching?

"In my first year of teaching, I had to prepare for seven new courses, work on my dissertation, get divorced and build a new life, look for a job (I had a one-year replacement position), handle committee assignments, prepare and deliver papers, and figure out how to teach. By the time the Lilly project began, my life had calmed down a bit and with the help of released time, I was more than ready to look at how to be a better teacher. . . . I strongly believe that second and third year teachers should be the focus of these Lilly grants. The graduate student has other priorities that would overwhelm his commitment to this project. The first year teacher needs to get oriented to teaching, the institution, the community, and to a new set of roles, and is unlikely to be able to mobilize much effort for a special project of this sort."

Can persons working in different disciplines profit from the same program or should there be clear disciplinary lines?

"The exchanges with colleagues who spoke other disciplinary languages forced me to revaluate my spiritual horizons, reassured me in some very crucial values, made me examine others, propelled me to try out new ideas, and most importantly it made me realize that I was not alone—not alone in believing that

education is truly a vocation. . . . In a more objective vein, the Fellowship has established a community of educators who dare confess themselves interested in the improvement of teaching. A community of men and women who are willing to go to some length to restate the mission of the university as an educational organization."

"No matter how independent the thinker, he suffers some tendency toward group-think when constantly exposed to those within his own discipline. Much of the challenge and excitement here has been due to the fact that we are surrounded by ideas and projects often far removed from those found in our own little corner of the academic world. . . . One of the best features of the program at Purdue has been the richness of group interaction."

"As a result of my participation in the Lilly program this past fall, I'm a true believer in the interdisciplinary approach. In fact, that is one of the real strengths of the program. The teaching and learning issues are basically the same regardless of the field. I find it terrifically useful to be yanked out of the vocabulary and assumptions of my own field when addressing issues of teaching approach and technique."

"The task of defining the goals (of the program) and the pathways to reach the goals has fallen to the Fellows themselves--a group of bright, aggressive, opinionated people from diverse fields who are hardly likely to agree on whether to have pizza or sandwiches with next week's meeting, let alone the agenda of the meeting. . . . The opportunity to interact so closely and fiercely with other young faculty is priceless."

What are the best features of the program at your University? What are the poorest features?

"I believe the program at Purdue is the one most suited to my needs and interests. The strong points of the program are many but most begin with Sam Postlethwait. He is a true source of inspiration and contact with him

under any circumstances would be a most enriching educational experience. Other aspects of the situation at Purdue that have contributed to the value of the program are the facilities (space, hardware and software available for structuring educational materials) and the widespread interest in various educational strategies to be found throughout the campus."

"At Hampton Institute, we teach four courses per semester and as Lilly Fellows we have a two course reduction in load. Before the beginning of the semester, I felt that reduction would easily cover the time needed to accomplish my project. However, that has not been the case, but I feel that this reduction should not be increased because conducting courses along with development of new skills is good in that the new information can often be tried out immediately."

"One particularly rewarding feature of the Miami program is the mentor-fellow arrangement. I have found that the best advice and direction comes from an experienced teacher. However, beginning teachers are often reluctant to impose on their senior colleagues. The mentor-fellow arrangement provides the fellow implicit license to present his/her problems, questions, and ideas to a respected senior colleague."

"The intern program, while offering numerous valuable experiences which have expanded my understanding of teaching, has virtually precluded the possibility of publishing within my area of study. This is a disadvantage for any fellow who must soon face a rapidly shrinking job market. . . . My teaching has already been affected in that I have begun to question some of my prior assumptions about college learning."

"The fellowship's main importance has been in my use of the award to increase my own institutional clout in bringing about changes in educational policy rather than in improving my personal teaching effectiveness. . . . From my point of view, the prestige of early recognition of teaching ability coupled with exposure to other research-oriented teachers was the

most important aspect of the Lilly program."

"I have on several occasions been able to help my students by informally phoning one of my Lilly colleagues and seeking their advice in areas in which I have little or no expertise. I have also found positive re-enforcement from discussions in our gatherings regarding the position of a young professor at MIT. It is a difficult and challenging job, but requires intellectual as well as moral support from one's colleagues sometimes, and the group of Lilly Fellows provides a welcome vehicle for this. It gives us an opportunity to discuss teaching methods, problems with students, learning and developmental processes—all things which are rarely discussed on a regular basis at any institution of higher learning."

How do you think your teaching will change as a result of your experience this year?

"My teaching not only will change; it has changed. The materials I write for my students' use are clearer, better organized, and more interesting. This showed up clearly on the course evaluation in December. With the new materials, the lab runs more smoothly, with fewer frustrations for staff and students. Less concrete, but no less important, is my own new awareness of the whole field of educational development. I can read the literature and hear and participate in discussions without the terrible feeling that I don't know what's going on."

"I am managing an introductory physics course which serves about 600 students per semester. The course is audio-tutorial and self-paced, so my experience at Purdue last year (as a Lilly intern) was a perfect preparation. Another faculty member and I are revising all the study guides and exam questions for both the fall and spring semesters."

"My own expectation, after this experience, is to set up a definite program for graduate assistants in which I can convey the principles which I've learned here

about learning and teaching."

"During my tenure as a Lilly Fellow I have been investigating ways of using computers to involve undergraduates in mathematical research. . . . In the spring term I offered a seminar based on this premise that students can use the computer to concentrate on *doing* mathematics rather than just learning about it. My activities involved teaching the course and supervising individual projects, as well as developing new approaches and computer facilities suitable for use in undergraduate research. The results, so far, have been highly encouraging and I plan to offer an expanded version of this course next year. I intend to continue my investigations into computers as both a learning and research tool in the future."

"I realize that excellence in teaching is less achievable than I used to imagine!"

"During the entire year I have made it a practice to read bits and pieces of literature on educational techniques and the psychology of learning. . . . Because time always seemed limited, I have never had the opportunity before to indulge in this kind of 'research'. . . . Ideas which were obtained from this reading were put into practice in the class I teach in the spring. This year's class departed substantially in technique from the preceding two years, especially with regard to optimizing class discussion and interest. My own feelings about the final results are mixed; the students gave it 'rave reviews.' Further analysis will require continued reflection and some intellectual distance from the actual events."

"I can think of few things in the last few years about which I am as enthused as working here. I suppose I had vaguely realized that being a good teacher required more than mere academic competence. But that realization has always been vague and ill-defined. In these few months with Sam Postlethwait I have begun to be able to focus on the criteria of good teaching. The concepts of preparation, organization,

presentation, curriculum, etc., have begun to take on operational meaning for me. Sam has begun—in spite of some early reluctance on my part—to make me not only conscious of, but conscientious about proper instructional programming."

"Another thing I have tried to work on is to make teaching mutual, to find ways in which my students can teach me. I try to read things students mention, just as they have to read what I suggest."

"As a result of the Lilly program, I find my more experienced colleagues discussing teaching issues with me. They view me as a resource person with regard to instruction. As a female in an all male department, the program has been influential in my gaining early acceptance. On our campus, I think we have formed a cohesive group of young faculty who will serve as a network to influence future faculty development efforts."

"One of my problems as an educator has been a singleness of approach to teaching. This program has given me access to the technology necessary to implement many innovative approaches to teaching. Audio mixers, sound-slide sync, slide developing, computer assisted instruction, videotape and TV cameras are sample items of technology which six months ago were outside of my competence. That is not true today. Technology has become an ally, genie, and slave, but not an end in itself."

"How will my teaching be changed by this experience? I definitely will not be chained to a lecture-lab format; I will have several options at my command. I know I will be a promoter of diversity in teaching. New doors have been opened as I have become aware of what teaching involves."

"The activities supported by my Lilly teaching award have helped me immensely in the process of moving into a new subject area and a new set of teaching areas. . . . Next term I plan to have a couple of my classes videotaped so that I can examine how I work. In addi-

tion, I plan to ask others associated with the Lilly program to observe my classes and to suggest ways that I can improve my teaching."

"My departmental colleagues have been very receptive to the program and my participation in it. We have weekly staff meetings and since December, when I reported on the Lilly conference in Indianapolis, we have been devoting one staff meeting per month to improving teaching. . . . My students have been very excited about the Lilly program. I would say that I have one or two students per day come to my office or send a note giving me suggestions on how to improve my teaching or to let me know some technique that another faculty member is trying."

"Yes, my teaching has changed over the year. At the beginning of the year I was interested in 'clear presentation' and 'logical development.' Now I'm coming to realize that brilliantly organized lectures are indeed a wonderful learning tool, but usually only for the faculty member. I find myself more concerned with the student side of the interaction, and I am getting better at assessing 'where the student is at' and suggesting individualized projects."

General comments:

"Change does occur here, and it occurs as renovation rather than innovation. The Lilly Fellow program is probably the most important example of the spirit of renovation on this campus. It fulfills two very important pedagogical needs without which undergraduate education and educators alike would stagnate; it provides young, relatively inexperienced Ph.D.'s with an opportunity to improve and refine their classroom skills under the tutelage of older, more established scholars; and it brings to a venerable institution the necessary enthusiasm of youth."

"We see the Lilly Awards as best directed toward assuring that young faculty as a group can have an impact on the institutions in which they teach, and that

they, in a sense, become a vehicle for making teaching and thinking about teaching a strong component of the university. In this model, interest in teaching 'filters up' rather than down (a direction which has traditionally not worked!)."

"Ultimately, the success of your program will be measured by the degree to which institutions consider teaching in reaching tenure and promotion decisions. Currently at most institutions, teaching is given only minor consideration. Research is given much more. The reason is obvious. Teaching is considered expense, research profit. In a sense, what you are doing is making an interest in teaching profitable."

"Primarily we need educational programs which are *qualitatively* better than the ones we presently have. The reason that university faculty don't talk much about how to improve teaching is that no one has yet convincingly demonstrated that it makes any difference. I think the Endowment should seek to develop programs which are so good that it will be obvious that thought and effort put into good teaching can really pay off. Initially, such programs will be very expensive, have lots of false starts, and probably be nothing like our current lecture-oriented system. But so long as the judgment of what is, and is not, 'good teaching' remains so subjective, and the results so marginal and hard to assess, you can't expect effort put into teaching to be seen as worthwhile."

"The development of young faculty is usually not an economic issue but rather an issue of time. The time of administrators, senior faculty, or acknowledged superb teachers is always apparently in short supply. It is the interest of these people and their recognition of efforts towards faculty development which spell the difference between effective development of teachers and ineffective token programs."

"In order to make teaching more important to the college professor, he/she must be rewarded for efforts to improve teaching. Offhand, I cannot think of ways

Lilly can induce colleges and universities to award promotion and tenure on the basis of good teaching along with consideration of research and service. Even though we might wish it were different, we know that people generally do what they are reinforced for doing. Making funds available to institutions to support faculty attempts to improve teaching methods reinforces that particular faculty member, whereas a general change in emphasis from research to teaching (or an equalization, perhaps) would affect every faculty member."

". . . the problems of teaching never go away. Now that I have 'made it' (tenure, promotion, books published, etc.), I find my problems come, as a teacher, precisely because I am sure of myself—too sure at times, too distant from the very undergraduates that I was once too close to. . . . This concern for teaching—at all levels—ought to be the responsiblity of the university and ought to be funded by the university. . . . But the fact is that universities, even if they could fund such programs, wouldn't: I am not cynical, but I don't think universities are ready, and won't be ready for decades, to take that 'inner morality' of the profession as seriously as they take the 'outer morality' of publication, national recognition, etc."

"I hope that the day will come when it will be as respectable for college faculty to talk about teaching as to discuss progress within a discipline. This goal is not an easy one to achieve, because the administrative policies regarding promotion and tenure are too heavily weighted toward recognizing accomplishments within a discipline, and place too little emphasis on teaching accomplishments. Consequently, senior faculty tend to be discipline rather than teaching oriented, and they project a similar role model to new and junior faculty members. Having stated the problem, I find that it is not as easy to offer sound advice on possible solutions. . . . If I were dean of faculty, I would establish a regular faculty seminar program dealing with teaching methods and curri-

culum development. Both senior and junior faculty members would be encouraged to attend and participate. Second, I would provide for summer workshops perhaps lasting as long as two weeks for pre-tenured faculty. These workshops would provide the setting for junior faculty to develop materials for their own courses with help from more experienced seniors. Each junior faculty member attending would also have an opportunity to test and evaluate his finished product with peers."

V

GOALS AND ACHIEVEMENTS

The program of Post-Doctoral Awards for the improvement of teaching is now in its seventh year. In preceding pages, we have explored the goals of the program, as defined by the Lilly Endowment and as perceived by the Fellows, campus program directors, and participants in the Lilly Conferences.

Have the goals and objectives of this program been realized? This question is very difficult to answer, partly because some of the goals are intangible, difficult to measure, and partly because it is hard to generalize when the campus-based programs are so individualized. Two evaluation efforts have been commissioned by the Lilly Endowment. The first was made in 1976, in the second year of the program by Malcom Parlett, and the second was made in the winter of 1979-80 by W. Max Wise.

Because his study was made when the program was just beginning, Parlett devoted much of his report to reviewing the rationale for the program and to proposing a variety of alternatives which might merit consideration by both the Endowment and the participating institutions. In subsequent years, some of his suggestions have been adopted; some have been tried and discarded; others still await testing. After six years of experience with the program, however, some of Parlett's comments and observations are well worth repeating.

"Underlying the whole program," he wrote, "is, first, a powerful concern to provide fruitful introductory experiences for the novice faculty member as he or she embarks on a professional career as college teacher. . . . Although not a new insight, it helps to remember that faculty members belong, at one and the same time, (a) to a scholastic disciplinary professional grouping or guild; (b) to a college or university that employs them; and (c) to a profession of teacher at the post-secondary level. For most faculty, certainly at higher status colleges and universities, the sense of affiliation, membership, and commitment is greatest in (a) and least in (c). There is a parallel in the reward system: (a) 'research and scholarship' predominates, while (b) contributions to the institution and (c) teaching performance vie for second place. . . . The (Lilly) program as a whole represents an attempt to foster institutional change by 'breaking the cycle' i.e., the cycle of young faculty adopting prevailing institutional norms and then, in turn, further reinforcing and perpetuating these norms. Breaking one cycle means that a dif-

ferent cycle, hopefully, can be established, with a different set of norms becoming legitimate to follow and to espouse. Achieving changes in established patterns of faculty thinking within a college or university milieu is notoriously difficult to accomplish. . . . This is intended to come, in this program, from communicating the central ideas enshrined in the program itself; from increased legitimacy and status being accorded to individuals and initiatives on the campus through the fact of the award of funds; and thirdly perhaps, from cross-fertilization between different settings, provided through inter-institutional meetings."

Parlett decared it too soon to know whether the program could or would achieve all of its objectives. Nonetheless, he offered this evaluation:

"At the present time, this program is arguably the most important of all six initiatives in faculty development by the Lilly Endowment. Nationwide, there is extreme strain on young faculty due to the restrictions on tenure. The competitive pressures are great indeed; and while exhortations and threats about good teaching are legion, there is little programmed to help young faculty; nor many signs of rewards going for concerted effort in this sphere. It is clearly a time for thinking carefully about the plight of young faculty; for older faculty to realize that the last five years have transformed what it is like to be a young instructor and that 'it was the same for us' is no longer accurate (it probably never was); and for foundations, as the Endowment has done, to aid in formulating strategies and to prompt institutions to do the same, in order to alleviate both the intense strain and frequent professional cynicism among young faculty."

Parlett added that the Lilly program implicitly accepts "high turnover in junior staff"; many Fellows may not stay in the institution in which their fellowship is served. "Individuals taking part in the program may go elsewhere but carry their expertise with them. The Endowment, albeit in a small way, is increasing the quality of the stock in the pool, nationwide."

An extensive study and evaluation was prepared by W. Max Wise and received by the Endowment in March 1980. Wise visited nine campus programs and interviewed a large number of directors, Fellows and administrators. He also visited an equal number of non-participants for comparative purposes. His findings are summarized in the following paragraphs.

1. At least 80 percent of the Fellows have developed new approaches to their teaching, they have adopted new teaching strategies, have substantially re-designed courses or designed entirely new ones, and have reached a greater understanding of their

students and their learning needs. The fellowship program has provided substantial psychological support to the Fellows, and they have gained self-confidence and a feeling of achievement and satisfaction in teaching. They gained, and highly valued, an introduction to the literature of learning and teaching, a literature that most of them were previously unaware of.

2. The campus programs tended to be "self-contained", that is, there was little involvement by senior faculty or administration. There was relatively little campus awareness of the program, and consequently little expectation of campus-wide impact. Department heads in particular evidenced little interest in giving priority to faculty development efforts.

3. The Endowment's policy of asking institutions to supplement foundation funds is sound, but such support has been small and usually on an *ad hoc* basis. No institution reported that the allocation of such support had been submitted to debate and decision by the university's budget committee.

4. The campus directors of the programs have worked very hard to make the programs successful, and are highly esteemed by the Fellows. Several continue to keep in contact with former Fellows. The position or status of the program director on his own campus appears to influence the likelihood that the institution will continue the work after foundation support is withdrawn.

5. There is little evidence that the campus programs have significantly changed the level of interest of institutions in improving teaching.

Based on these findings, Wise offered the following recommendations for the Endowment.

1. Continue to support the program of Post-Doctoral Teaching Awards, because "the evidence is persuasive that the programs have provided important help to young faculty. The programs speak to vital needs of young faculty and help remedy deficiencies in institutional structures and procedures."

2. Directors of the campus program should place greater emphasis on helping Fellows carry their individual projects to completion. This might require more time than directors are now able to give this program, which may in turn relate to foundation funds and their allocation.

3. Consideration should be given to opening the program to senior professors, who also have problems and needs in regard to the improvement or rejuvenation of teaching. Further, senior faculty are influential persons on campus and thus more likely to affect institutional change than are junior faculty.

4. For the same reasons, consideration should be given by the Endowment to developing programs to strengthen the interest of academic administrators in improving teaching.

5. The Endowment should insist that the campus-based programs include provisions for more involvement of academic administrators. There should be some direct contact between the academic administrators and individual Fellows.

Evaluation, like beauty, may be at least in part in the eye of the beholder. Each person who has observed the Lilly Endowment program has brought to it a different set of experiences and expectations. In writing this report, I have concentrated upon visits and interviews at only four of the institutions involved. However, I have also read all the program proposals and reports and all of the letters of reflection written by the fellows during the six years. My conclusions both agree with and differ from those of Parlett and Wise, though sometimes the differences are simply a matter of emphasis.

Clearly, the program's greatest impact has been upon the individual Fellows, not upon senior faculty, department chairpersons, administrators, or institutions. The program has been more an investment in people than in educational theory or policy.

Assessed from that point of view, it has been an outstanding success. Both in their letters of reflection, written while in the midst of the fellowship activities, and in interviews from one to five years later, the Fellows speak in glowing terms of what the fellowship meant to them. They gained confidence in themselves as teachers; they gained a new pride in the profession of teaching, as distinct from that of scholar. They made tangible gains in preparation of teaching materials and in mastery of teaching strategies and skills. They learned that no single method or style of teaching is best in all circumstances; there are many "good" methods and styles, and room for the individual teacher to develop his own best style. And they gained an important group awareness, a lessening of their feelings of isolation and paranoia, both rather common, unfortunately, among young faculty worried about tenure and promotion.

On some campuses, the Lilly Fellows developed a group spirit and awareness of the "political" power that they might wield by continuing to work together. In general, however, their contacts with one another after the fellowship year are slight. The prospect for institutional change and for improvement of teaching as a result of the Lilly Endowment program rest upon the Fellows' performance as individuals as they rise in the faculty hierarchy. As one campus director pointed out, his former Fellows are now, several years later, beginning to appear on rosters of departmental, school

and college committees on such matters as curriculum revision, teaching, tenure and promotion policy. It is there that the long-range results of this program may be expected to appear.

The most important single factor in the success of the program has been its provision for released time. As has been noted, in a good many instances, the time turned out to be less than had been promised (or hoped for), but even a minimal amount of time specifically designated for thinking about and working at the improvement of teaching was significant, both for itself and for the psychological reinforcement of the importance of the activity.

The Fellows who gain most from this program are those who already are committed to teaching and who sense their own need for added knowledge and skills. In a few instances, institutions have "assigned" to the program those whom department chairpersons or deans thought were most in need of such help. But the campus directors are unanimous in saying that these people accomplished little.

Perhaps one reason the Fellows do not develop a stronger group identity and do not remain in touch with one another after the fellowship year is that, in general, the institutions do not provide a specific space for the Lilly Endowment program. At Tennessee, Ohmer Milton designated a tiny conference room as the "library" for the Fellows. Even though the Fellows had to share use of the room with other clients of the Center for Learning Research, it still functioned as a headquarters for them, and perhaps significantly, the Tennessee Fellows have a high degree of group awareness and cohesiveness. At most institutions, the office of the campus director was the nearest thing the Fellows had to a place of their own. Space is important; it would be helpful if the Lilly Fellows had an assigned place of their own on each campus.

As remarked elsewhere in this report, the campus director is the key to success. Certainly, all have worked very hard to make the program succeed on their campuses. Several have spoken of a need for the directors to work together in some informal fashion. Perhaps a meeting or two each year of the directors alone would lead to a useful exchange of ideas and experiences.

This writer concurs with Parlett and Wise in believing that involvement of a few mid-career or senior faculty might strengthen this program. Or perhaps better yet, a separate but similar fellowship opportunity might be made available to such people. Faculty "burn-out" is a reality; a program of redevelopment and rejuvenation could be helpful.

Finally, it must be observed that the results of the Lilly Endowment program in terms of institutional change and institutional

policy are not yet proved. Strong arguments can be advanced pro and con, but it is simply too soon to know. There is considerable evidence, for example, that as a result of this program, there is increased concern about improving the teaching effectiveness of graduate teaching assistants, as witness the system-wide conferences on teaching at Indiana University and the University of Tennessee-Knoxville. At West Virginia, the fellowship program has proved its viability, because it is now in its fourth year of operation without foundation support. Tennessee is continuing the program in at least one college; others may follow.

There are two overriding factors, probably, in determining whether fellowship programs will continue without grant support. Those factors are money and commitment to the idea of faculty development by administrators and/or senior faculty.

As we enter the 1980's, money for higher education is scarce and seems likely to become scarcer. Institutions are engaged in intense competition for every penny that is available from both public and private sources. Regrettably, faculty development and the improvement of teaching may be seen by trustees and top administrators as "expense" items that can be trimmed away when budget cuts must be made.

But the scarcity of money can be used as an argument against almost any program or innovation. The evidence of the Lilly Endowment program is that substantial gains in teaching can be made by the investment of rather small sums of money. Demonstrably, the programs have made significant contributions on the campuses where they have been tried, and no institution has received a grant larger than $50,000 for a single year. Shortage of money need not prevent the kind of program advocated by the Endowment.

The matter of administrative or faculty commitment is perhaps more difficult to evaluate. It is clear, and noted by both Parlett and Wise, that commitment and involvement by top administrators (presidents, and vice presidents and provosts) is important. Yet the evidence is that the teaching improvement programs have been significant on campuses because of commitment by a dean, or the director of a service unit, or by a single senior faculty member, as often, perhaps oftener, than by a provost or vice president. "To break the cycle," as Parlett phrased it, is perhaps a revolutionary activity. And revolutions are rarely made by those who are in charge; revolutions come from within and from the lesser ranks.

As Laura Bornholdt notes in her introduction to this report, the jury is still out on whether institutional change can be achieved

through a program such as the Lilly Post-Doctoral Teaching Awards. Meantime, the program has had, and will continue to have immediate and significant impact upon the young faculty who participate in it. Many of them are the outstanding teachers of tomorrow, and some of them are the department chairpersons, deans and presidents of tomorrow. Institutional as well as individual change may thus come, though more slowly and less dramatically.

DIRECTORS OF LILLY POST-DOCTORAL TEACHING AWARDS PROGRAMS, 1974-1981

1974-75

Empire State College
(State University of New York)
Robert V. Barylski*, Assistant to the Vice President for Academic Affairs

Massachusetts Institute of Technology
Benson R. Snyder, Director, Divison for Study and Research
Roy Kaplow, Professor of Material Sciences

Purdue University
Sam N. Postlethwait, Professor of Biology

1975-76

Bryn Mawr College
Mrs. Willard King, Chairman, Spanish Department
Dean Bernard Ross**

Massachusetts Institute of Technology
Benson R. Snyder, Director, Divison for Study and Research
Roy Kaplow, Professor of Material Sciences

Purdue University
Sam N. Postlethwait, Professor of Biology

University of Chicago
William R. Veeder, Professor of English

West Virginia University
Charles E. Wales, Professor of Engineering and Education
Gene D'Amour*, Associate Professor, Philosophy Department

1976-77

Empire State College
(State University of New York)
William Laidlow, Dean, Genesee Valley Learning Center*

Hampton Institute
Ruth N. Swann, Director, Faculty Development Center

Purdue University
Sam N. Postlethwait, Professor of Biology

*No longer at the institution.
**Deceased

West Virginia University
Charles E. Wales, Professor of Engineering and Education
Gene D'Amour*, Associate Professor, Philosophy Department

University of Wisconsin-Green Bay
Charles F. Matter, Associate Dean for Academic Affairs

1977-78

Empire State College
(State University of New York)
William Laidlow, Dean, Genesee Valley Learning Center*

Hampton Institute
Ruth N. Swann, Director, Faculty Development Center

University of Florida
Ronald A. Carson, Associate Professor, Department of Community Health and Family Medicine, College of Medicine

University of Tennessee
Ohmer Milton, Director, Learning Research Center

University of Wisconsin-Green Bay
Charles Matter, Associate Dean for Academic Affairs
David Littig, Assistant Professor, Urban Analysis, College of Community Sciences

1978-79

Hampton Institute
Ruth N. Swann, Director, Faculty Development Center

University of Florida
Ronald A. Carson, Associate Professor, Department of Community Health and Family Medicine, College of Medicine
Todd L. Savitt, Department of Community Health and Family Medicine, College of Medicine

University of Rhode Island
Glenn R. Erickson, Instructional Development Program

University of Tennessee
Ohmer Milton, Director, Learning Research Center

University of Wisconsin-Green Bay
Charles Matter, Associate Dean for Academic Affairs
William Burnett, Assistant Professor, Theater

*No longer at the institution.

1979-80

Carnegie-Mellon University
Edward R. Schatz,
Provost and Vice President for Academic Affairs

Indiana University
Thomas Schwen, Division of Development and
Special Projects Audiovisual Center

Miami University
Sandra Packard, Special Assistant to the
Executive Vice President for Academic Affairs and Provost

University of Florida
Ronald A. Carson, Associate Professor, Department of
Community Health and Family Medicine
Todd L. Savitt, Department of Community Health and
Family Medicine, College of Medicine

University of Rhode Island
Glenn R. Erickson and Bette L. Erickson,
Instructional Development Program

University of Tennessee
Ohmer Milton, Director, Learning Research Center

1980-81

Carnegie-Mellon University
Anthony N. Penna, Associate Dean,
College of Humanities and Social Sciences

Indiana University
Thomas Schwen, Division of Development and
Special Projects Audiovisual Center

Jackson State University
Velvelyn E. Foster, Department of History

Miami University
Sandra Packard, Special Assistant to the Executive
Vice President for Academic Affairs and Provost
Milton D. Cox, Department of Math and Statistics

University of Rhode Island
Glenn R. Erickson and Bette L. Erickson,
Instructional Development Program

University of Rochester
Kenneth E. Clark, Dean, College of Arts and Science

The Lilly Endowment staff members who have been associated with the Post-Doctoral Teaching Awards Program since its inception include:

Laura Bornholdt	1974-present
Anne Riley	1975-76
Peter Havholm	1976-78
Ronald D. Margolin	1978-80
Julius E. Thompson	1980-present

Paul A. Lacey, Professor of English, Earlham College, became director of the program in the fall of 1980.

Note on the Author

Alice Beeman was the first person to be elected president of the Council for Advancement and Support of Education (CASE) when it was created in 1974 through the merger of the American College Public Relations Association and the American Alumni Council. She became president emeritus of the Council in 1978.

Beeman's background for reporting on developments in higher education includes service as a board member and later as general director for the American Association of University Women, as well as earlier positions as director of information services and director of publications for the University of Michigan. She is a member of Women in Communications and of the Advisory Committee to the Center for American Women and Politics at Rutgers University. Beeman is also a frequent contributor of book reviews to *CASE Currents*.